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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/087,511	03/01/2002	Veijo Pulkkinen	0207US-Euroelektro	4052
23521	7590	07/20/2006	EXAMINER	
SALTAMAR INNOVATIONS 30 FERN LANE SOUTH PORTLAND, ME 04106			YE, LIN	
			ART UNIT	PAPER NUMBER
			2622	

DATE MAILED: 07/20/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/087,511	<b>Applicant(s)</b> PULKKINEN, VEIJO	
	<b>Examiner</b> Lin Ye	<b>Art Unit</b> 2622	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 15 May 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 16-35 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 16-22 and 24-35 is/are rejected.
- 7) ☒ Claim(s) 23 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |                                                                                                                        |                                                                                         |
|------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                            | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____                                                |

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 5/15/06 has been entered.
2. Applicant's arguments with respect to claims 16-22 and 31-35 have been considered but are moot in view of the new ground(s) of rejection.

### ***Claim Objections***

3. Claim 23 objected to because of the following informalities:

The claim 23 is a depend claim of claim 7. However, the claim 7 has been cancelled by applicant.

Appropriate correction is required.

Accordingly, the claim 23 not been further treated on the merits.

### ***Claim Rejections - 35 USC § 101***

4. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

5. Claims 16-22 and 31-35 rejected under 35 U.S.C. 101 because:

For claims 16-22, the claimed invention is directed to non-statutory subject matter. Data structures (program) not claimed as embodied in **computer-readable media** are descriptive material *per se* and are not statutory because they are not capable of causing functional change in the computer. See. e.g., Warmerdam, 33 F. 3d at 1361, 31 USPQ2d at 1760 (claim to a data structure *per se* held nonstatutory). Such claimed data structure and other claimed aspects of the invention which permit the data structure's functionality to be realized. In contrast, a claimed computer-readable medium encoded with a data structure defines structural and functional interrelationships between the data structure and the computer software and hardware components which permit the data structure's functionality to be realized, and is thus statutory.

For claims 31-35, the claimed invention is a practical application of an abstract Idea (e.g., program as *§101* Judicial Exceptions). However, the claims do not provide a practical application that produces a **useful, tangible result**. Therefore, the examiner has determined that the claims are nonstatutory (See Interim Guidelines For Examination of Patent Applications for patent Subject Matter Eligibility).

For art examination purpose, these claims will be interpreted as they are best understood.

***Claim Rejections - 35 USC § 112***

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 16-23 and 31-32 are rejected under 35 U.S.C. 112, second paragraph, as being vague and indefinite.

Referring to claim 16, states “adaptation program comprising: a data transfer interface... ; an image processing interface...; a result reception module...”. However, there is unclear how the data structure or abstract ideas (adaptation program) includes the physical structures (e.g., interface or module)

Referring to claim 31, states “the camera comprising: an image-processing program... an adaptation program...”. There are no any physical structures included in the camera instead of the data structures (e.g., program).

Referring to dependent claims 17-22 and 32 these claims refer to the claims 16 and 31. Therefore, they are rejected same as claims 16 and 31 under 35 U.S.C. 112, second paragraph.

Appropriate correction is required.

For art examination purpose, the claims 16-23 and 31-32 will be interpreted as it is best understood.

### ***Claim Rejections - 35 USC § 103***

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 16-22 and 24-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Demarest et al. U.S. Patent 6,115,650 in view of Sones et al. U.S. Patent 5,911,003.

Referring to claim 16, the Demarest reference discloses in Figures 3, 8 and 9A-9G, an adaptation program (Vision Control 160 and Task Manager 240, See Col. 14, lines 19-25) adapted to operate in conjunction with a smart camera (vision system includes a camera 150, see Col. 14, lines 42-51) having an image processing software (auto-imaging algorithm, see Col. 14, lines 29-40), and with programmable control logic (PLC 120, see col. 9, lines 40-67), the adaptation program comprising: a data transfer interface as shown in Figure 8 adapted to couple to a data link and receive a code (task) and a command to take a still picture of an object (See Col. 15, lines 5-15) said code corresponding to at least one picture-related calculation task (See Col. 16, lines 40-63); an image processing interface (Vision Control 160) adapted to instruct the image processing software (auto-imaging algorithm) to perform said at least one calculation task responsive to said code, on picture taken by the camera; a result reception module (Task Manager 240 for vision/robot system, See Col. 17, lines 40-56) adapted to receive a result of said calculation task from the image processing software, said result being in the form of a single value or a value set, and construct a response to be transmitted to said control logic via said data link (e.g., the task manager report any errors back to the PLC 120). However, the Demarest reference does not explicitly states wherein said code is being transmitted from the control logic responsive to a process related event detected by a sensor coupled to said logic.

The Sones reference teaches in Figure 2, an inspection system (10) comprising the control logic (processor 40) transmits a code (control signal) to a camera (30) responsive to a process related event detected by a sensor (part sensor 50, see Col. 4, lines 11-17) coupled to the logic (40). The Sones reference is evidenced that one of ordinary skill in the art at the time to see more advantages an industrial inspection control system using a sensor to detect a processes related event so that the control logic can automatically transmit a code for controlling system operation. For that reason, it would have been obvious one having ordinary skill in the art at the time of the invention was made to modify the control system of the Demarest ('650) by providing a sensor for detecting a processes related event as taught by Sones ('003).

Referring to claim 17, the Demarest and Sones references disclose all subject matter as discussed with respected to claim 16, and the Demarest reference discloses the adaptation program executed by processing facilities integrated with the smart camera (See Col. 15, lines 45-53).

Referring to claim 18, the Demarest and Sones references disclose all subject matter as discussed with respected to claim 16, and the Demarest reference discloses further constructed to perform a plurality calculation tasks responsive to a single code (See Col. 16, lines 40-60).

Referring to claim 19, the Demarest and Sones references disclose all subject matter as discussed with respected to claim 16, and the Demarest reference discloses wherein modifications to said adaptation program cause modifications to the behavior of an assembly comprising the camera and image processing software (See Col. 15, lines 49-53).

Referring to claim 20, the Demarest and Sones references disclose all subject matter as discussed with respect to claim 19, and the Demarest reference discloses wherein said modifications are initiated remotely to said camera by PLC (120) (See Col. 14, lines 1-25).

Referring to claim 21, the Demarest and Sones references disclose all subject matter as discussed with respect to claim 16, and the Demarest reference discloses wherein the data link comprises a field bus coupled to the programmable control logic (PLC 120), and wherein said code is transmitted automatically by the control logic as shown in Figure 8.

Referring to claim 22, the Demarest and Sones references disclose all subject matter as discussed with respect to claim 16, and the Demarest reference discloses wherein modifications made only in the process control program modify the tasks to be performed by the image-processing program (See Col. 15, lines 49-53)

Referring to claim 24, the Demarest reference discloses in Figures 3, 8 and 9A-9G, a process control system comprising: a programmable logic controller (PLC 120, see col. 9, lines 40-67) having a process-control program for controlling an industrial process; a smart camera (vision system includes a camera 150, see Col. 14, lines 42-51) physically separated from said controller (120), and coupled thereto via a data transfer link, the camera (vision system) comprising an image-processing program (vision control task includes Auto-imaging algorithm) constructed to selectively perform a plurality of calculating tasks on a still image taken by the camera (see Col. 16, lines 39-63), and produce a task result in the form of a single value or a value set, the camera further comprising an adaptation program (Task manager 240 and vision control task 160) constructed to receive a code containing query from said controller, utilize the code to initiate taking a still image and selectively



executing at least one of said plurality of calculating tasks thereupon, and send a response to said query to said process control program (see Col. 17, lines 40-68). However, the Demarest reference does not explicitly states a sensor coupled to said controller, wherein said process control program is constructed to send said query responsive to a process related event detected by the sensor.

The Sones reference teaches in Figure 2, an inspection system (10) comprising the control logic (processor 40) transmits a code (control signal) to a camera (30) responsive to a process related event detected by a sensor (part sensor 50, see Col. 4, lines 11-17) coupled to the logic (40). The Sones reference is evidenced that one of ordinary skill in the art at the time to see more advantages an industrial inspection control system using a sensor to detect a processes related event so that the control logic can automatically transmit a code for controlling system operation. For that reason, it would have been obvious one having ordinary skill in the art at the time of the invention was made to modify the control system of the Demarest ('650) by providing a sensor for detecting a processes related event, and process control program is constructed to send said query responsive to a process related event detected by the sensor as taught by Sones ('003).

Referring to claim 25, the Demarest and Sones references disclose all subject matter as discussed with respected to claim 24, and the Demarest reference discloses wherein said query comprises a plurality of codes (e.g. a plurality of tasks or commands, see Col. 15, lines 5-25).

Referring to claim 26, the Demarest and Sones references disclose all subject matter as discussed with respect to claim 24, and the Demarest reference discloses wherein said query further comprises parameters (see Col. 15, lines 40-52).

Referring to claim 27, the Demarest and Sones references disclose all subject matter as discussed with respect to claim 24, and the Demarest reference discloses wherein the adaptation program (task manager 240 and vision control task 160) is further constructed to translated said code to a plurality of calculation tasks to be preformed by said image processing software (See Col. 16, lines 40-68).

. Referring to claim 28, the Demarest and Sones references disclose all subject matter as discussed with respect to claim 24, and the Demarest reference discloses wherein said process control program is constructed to request a plurality of tasks, and wherein some of said calculation tasks are triggered in accordance with said response (See Col. 14, lines 1-25).

Referring to claim 29, the Demarest and Sones references disclose all subject matter as discussed with respect to claim 24, and the Demarest reference discloses wherein said process related even is the sequential detection of objects (needles), and wherein said image is taken of each of said objects (See col. 15, lines 5-25).

Referring to claim 30, the Demarest and Sones references disclose all subject matter as discussed with respect to claim 16, and the Demarest reference discloses wherein the data transfer link is a field bus as shown in Figure 8.

Referring to claim 31, the Demarest and Sones references disclose all subject matter as discussed with respect same comments to claims 16 and 24.

Referring to claim 32, the Demarest and Sones references disclose all subject matter as discussed with respected same comments to claims 16, 24 and 27.

Referring to claim 33, the Demarest and Sones references disclose all subject matter as discussed with respected same comments to claims 16 and 24.

Referring to claim 34, the Demarest and Sones references disclose all subject matter as discussed with respected same comments to claims 16, 24 and 27.

Referring to claim 35, the Demarest and Sones references disclose all subject matter as discussed with respected to claims 16 and 24, and Sones reference discloses displaying said still image on a video monitor ( display 80) and wherein modification needed for the process control program are made according to the monitor picture (See Col. 4, lines 58-67). The Sones reference is evidenced that one of ordinary skill in the art at the time to see more advantages an industrial inspection control system having a video monitor for user so that user can modify the process control program according the picture display on the video monitor easily with input system. For that reason, it would have been obvious one having ordinary skill in the art at the time of the invention was made to modify the control system of the Demarest ('650) by providing a video monitor for user to modify the process control program according the picture display on the video monitor as taught by Sones ('003).

### ***Conclusion***

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10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lin Ye whose telephone number is (571) 272-7372. The examiner can normally be reached on Mon-Fri 8:00AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David L. Ometz can be reached on (571) 272-7593. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Lin Ye  
Primary Examiner  
Art Unit 2622

July 17, 2006